

I claim:

1. A device for determining an optimized decision threshold for a high speed, high rate data regenerator, comprising:

5 a first comparator and a first retiming circuit for comparing a recovered data signal with a preset threshold and providing a pseudo-data signal representative of said recovered data signal;

 a second comparator and a second retiming circuit for comparing said recovered data signal with said optimized decision threshold and
10 providing a regenerated data signal; and

 a low pass filter for separating a DC component from said first signal and using said DC component to provide said optimized decision threshold.

15 2. A device as claimed in claim 1, wherein said preset threshold varies linearly from a high value to a low value to provide said DC component as a representative of the eye of said pseudo-data signal.

 3. A device as claimed in claim 2, further comprising means for
20 storing said DC component.

4. A method for determining an optimized decision threshold for a high speed, high rate data regenerator, comprising:

 comparing and retiming a recovered data signal with a preset
25 threshold, for providing a pseudo-data signal representative of said recovered data signal;

 comparing and retiming said recovered data signal with said optimized decision threshold for providing a regenerated data signal;

 filtering said pseudo-data signal for separating a DC component;
30 and

 monitoring said DC component to provide said optimized decision threshold.